Zaber Ibn Abdul Hakim

+880 1961-896264
zaberhakim666@gmail.com
personal-portfolio

google scholar
kaggle
linkedin

I have gained extensive experience in deep learning over the past 4 years. Initially, I actively participated in multiple competitions on Kaggle, DrivenData, and the IEEE Signal Processing Society. Ranked as a **Kaggle Competition Master**, I attained the best overall Kaggle rank of 385 among 200,000+ users. Additionally, I have engaged in various research activities and authored multiple research publications. Currently, I am working as a machine learning engineer.

EDUCATION

- **Bachelor of Science in Computer Science and Engineering** — March 2018 — May 2023
  Bangladesh University of Engineering and Technology
  CGPA : 3.83 (out of 4.00) | *Enlisted for Deans List Award*

EXPERIENCE

■ **Machine Learning Engineer**   Jun 2023 — Current
   IQVIA
   - Developing a general and multi-purpose fine-tuned Large Language Model
   - Developing intelligent agents to answer clients' natural language queries
   - Developing FastAPI & FlaskAPI for the ML algorithms to communicate with the backend
   - Onboarding duties of recently joined employees

■ **Research Intern**   Jan 2022 — Dec 2023
   Xu Lab
   Carnegie Mellon University
   - Improved the understanding of different sentence components in multiple video-language joint learning tasks.
   - Devised a solution to detect anomalous events in automated tools during experiments in a laboratory using recorded videos.
   - completed the writing of two scientific manuscripts. One accepted and another under review.
   - Supervised one undergraduate student in a research work

RESEARCH PUBLICATIONS

■ **"Leveraging Generative Language Models for Weakly Supervised Sentence Component Analysis in Video-Language Joint Learning"**,
   ZIA Hakim, NH Sarker*, RP Singh, B Paul, A Dabouei, M Xu*
   Paper Link

■ **"ArtiFact: A Large-Scale Dataset with Artificial and Factual Images for Generalizable and Robust Synthetic Image Detection"**,
   MA Rahman, B Paul*, NH Sarker*, **ZIA Hakim**, SA Fattah*
   Published in **2023 IEEE International Conference on Image Processing (ICIP 2023)**
   Paper Link   **Dataset**

■ **"Detecting Anomalies from Liquid Transfer Videos in Automated Laboratory Setting"**,
   *NH Sarker, **ZIA Hakim**, A Dabouei, MR Uddin, Z Freyberg, A MacWilliams, J Kangas, M Xu*
   Published in **Frontiers in Molecular Biosciences (under AI in Biological and Biomedical Imaging)**
   Paper Link

■ **"Attention-Driven Multi-Modal Fusion: Enhancing Sign Language Recognition and Translation"**,
   ***ZIA Hakim**, RM Swargo, MA Adnan*
   Arxiv Preprint
   Paper Link

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Machine Learning Competitions

■ SIIM-FISABIO-RSNA COVID-19 Detection — Aug 2021
Identify and localize COVID-19 abnormalities on chest radiograph images
*4th Place out of 1305 teams. (**Gold Medal Winner at Kaggle**)* | *Best Student Team Award Winner*

■ HP Presents Kaggle Days World Championship 2022 — Sept 2022
Winner of Shanghai Regional
Selected as one of the top 36 data science teams globally to participate in the final event at Barcelona, Spain

■ Deep Chimpact — Nov 2021
Depth Estimation of animals from Images for Wildlife Conservation
Winner | *1st Place out of 313 teams*

■ IEEE Signal Processing Cup — May 2022
Differentiation between original human speech and synthetic speech.
Winner | Presented our solution at ICASSP 2022, Singapore

■ IEEE Video & Image Processing Cup — Sept 2022
Synthetic Image Detection.
First Runner-up

■ NFL 1st and Future - Impact Detection — Jan 2021
Detection of helmet impacts between players in videos of NFL games.
*25th Place out of 460 teams. (**Silver Medal Winner at Kaggle**)*

Software Projects

■ How Are You
A Mental Health Screening Site
Used Flask, ReactJS and PostgreSQL

■ BUET Alumni Portal
An Portal For Alumni for my university
Used Django, HTML, CSS, JavaScript and PostgreSQL

Extra Curricular Activities

■ Technical Committee Chair — May 2022 - May 2023
IEEE Computer Society
"Bangladesh Univerisity Of Engineering & Technology (BUET)" Student Branch Chapter

■ Organizer — Jul 2022
DL Sprint - BUET CSE Fest 2022
First Inter-University Deep Learning Competition hosted by BUET

This competition won **Kaggle Community Competition Creator Prize: July Month** for its problem statement, community involvement, and impact

■ Speaker : Introduction to Kaggle and Deep Learning — Jun 2022
An introductory workshop organized by "IEEE Computer Society BUET Student Branch"
150+ students from different universities attended this session